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- Special Report: Cable's financial outlook
- FCC data shows cable employment jumps
- USFL scores points with ESPN affiliates
- TCI, Multimedia, Busch team for sports net

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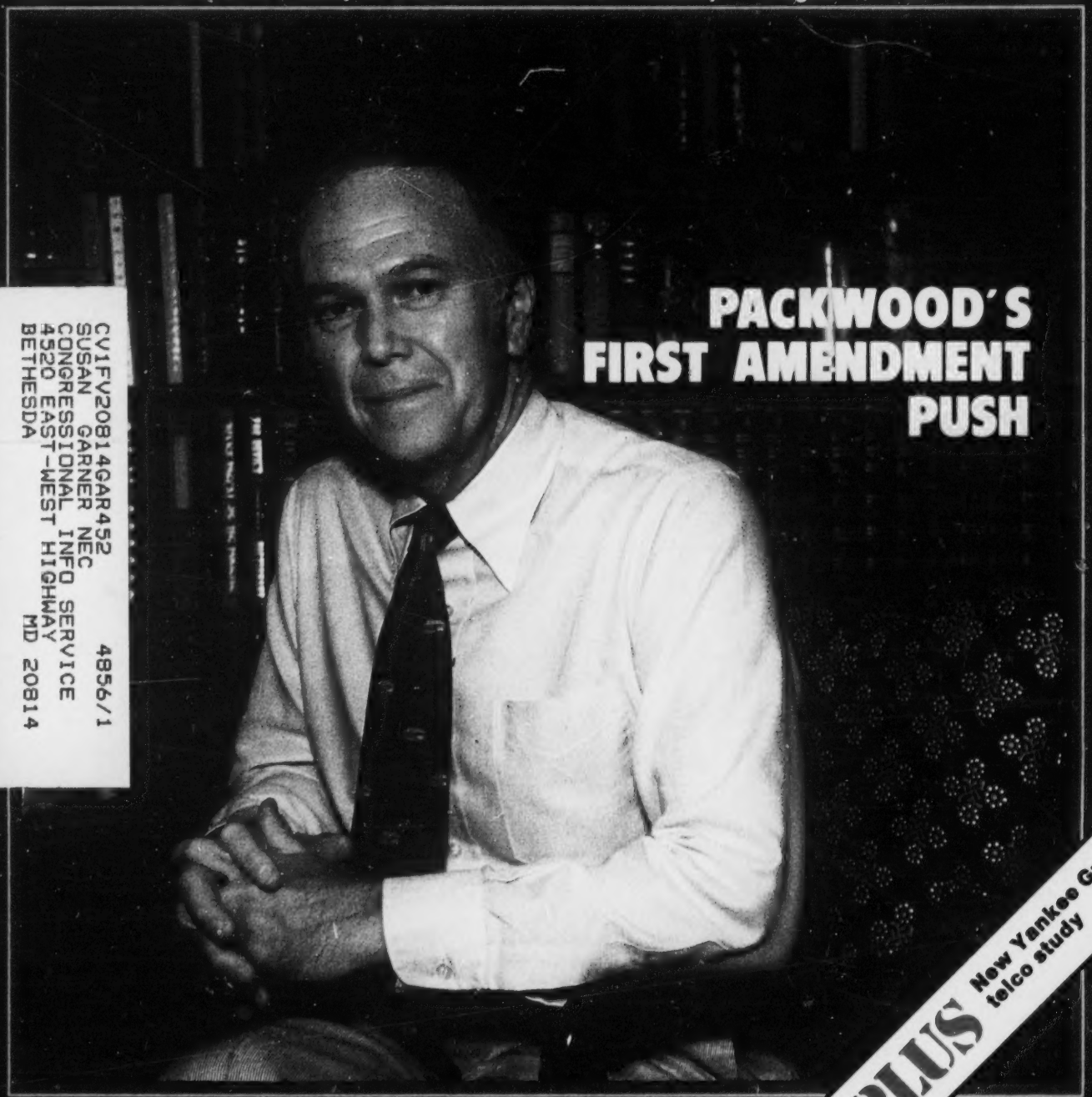

PACKWOOD'S FIRST AMENDMENT PUSH

PLUS New Yankee Group telco study

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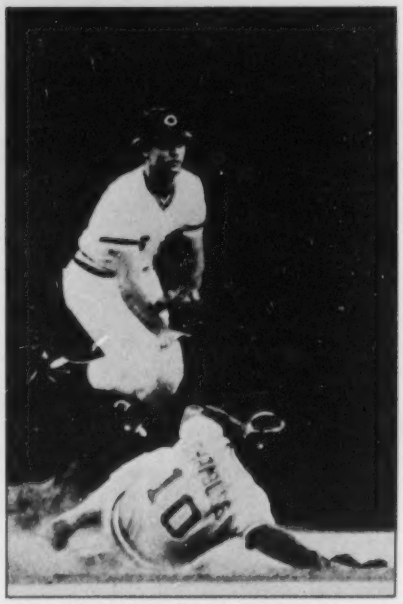


Reds baseball action is among the events to be offered on Sports Time.

Brewing sports partnership

Anheuser-Busch has brewed a partnership with TCI and Multimedia to operate Sports Time, a Midwest regional pay sports service to start next spring. **Leading the week, pages 16-20.**

Koch, cable firms sign off

After 18 months of negotiations, Mayor Koch and six cable companies sign off on the franchise agreements that will bring cable TV to 2.2 million homes in New York's outer boroughs. **Leading the week, pages 16-20.**

CAB, SRDS team up

Cabletelevision Advertising Bureau and Standard Rate and Data Service join forces to bring co-op information to MSOs and ancillary cable businesses. **Leading the week, pages 16-20.**

Coleman gets 'buyout period'

Landmark settles legal hassle with John Coleman by agreeing to give him a "buyout period" during which he can search for a new Weather Channel backer. If he finds none, Landmark takes over—and, sources say, could shut down TWC. **Leading the week, pages 16-20.**

NLC addresses dissidents

The National League of Cities board of directors approved a resolution July 15 stating that it would not oppose efforts by any city to alter the cable/city legislative compromise. NLC officials insisted that their support of S. 66 has not wavered. **Leading the week, pages 16-20.**

Financial services chart

This pull-out chart lists cable's financial services—analysts, brokers, consultants and banks. **Page 59.**

HBO's situation comedy

Pay service strikes deal with Lorimar, resulting in political satire, *Over Here, Mr. President.* **Page 24.**

ConcerTV rocks in Jersey

Group W Cable system test marketing four-hour, MTV-like spin-off geared to capture young audiences. **Page 26.**

ESPN's ad units score

Sports network's USFL coverage generates good response by affiliate cable operators to 30-second spots. **Page 31.**

Film ads on music video

Music-filled movies such as *Flashdance* and *Staying Alive* find music video services a natural place to advertise. **Page 31.**

Cable employment up 40%

Minority workforce grows slightly, according to Federal Communications Commission's 1982 data. **Page 32.**

Moving toward maturity

Analysts see continued difficult times, but cable's track record ensures healthy support. **Page 76.**

Futurex information network

Jones International subsidiary will bypass standard personal computer market by connecting directly to cable **Page 87.**

About the cover

Craig Leddy interviews Sen. Bob Packwood this week in *CableVision Plus*. Cover photo by Al Stephenson.

This week in PLUS

Now that S. 66 is settled in his half of Congress, Sen. Bob Packwood can move onto other concerns—like First Amendment coverage of electronic media. Packwood explains to *CableVision Plus* his stand on the phone companies and his plan of action with the Freedom of Expression Foundation to repeal the content doctrines. . . Opponents have become allies before, and The Yankee Group says it sees it happening close to home. In its new report, "Cable and the Telcos: From Confrontation to Detente," The Yankee Group predicts that relations between the two industries will become less strained and more cooperative. **Pages 35-58.**

Cable employment up 40 percent

Minority workforce grows slightly, according to FCC's 1982 data

WASHINGTON — While many industries were laying off workers in 1982, employment in the cable television industry rose approximately 40 percent, according to statistics released July 18 by the Federal Communications Commission.

While actual figures collected from Annual Employment Reports (Form 395-A) showed a 27.6 percent rise, FCC estimates of employees excluded from the reports boosted the tally to 40 percent. The FCC estimated a total of 71,493 full-time employees in the industry in 1982, compared to approximately 51,000 in 1981.

Minorities made modest gains in the industry. Minority employment in top-level jobs (managers, professionals, technicians and sales workers) increased 2.5 percent in MSO headquarters and 1.6 percent in cable units with five or more employees.

The National Cable Television Association, in a statement from NCTA President Tom Wheeler, said the minority increase is a "trend that is bound to continue as cable builds in major urban markets."

Sylvia Marshall, NCTA director of Human Resources and head of many projects for minorities, said, "I personally would like to see more minorities in visible decision-making positions. But it is important to see continuing steady improvement. You're not going to have 50 percent minority hiring overnight. The increase has been consistent."

The National Black Media Coalition criticized cable's equal employment opportunity performance and questioned the accuracy of the statistics. Pluria Marshall, chairman of the coalition, said the "miniscule increase" does not "reflect any particular need for joy on the part of minorities."

The statistics were released at a time when the FCC is stepping up its enforcement of EEO regulations. Last spring, the FCC publicly criticized the minority hiring record of Tele-Communications Inc.'s Denver headquarters and sounded a warning to the industry in general. Congress has been critical of the FCC's commitment to minorities and is examining ways to increase minority participation in telecommunications.

The FCC requires that at least 50 percent of the local minority labor force be reflected in a cable system's employment. For example, if a cable system is operating in a city with a 30 percent minority workforce, the system is obligated to have at least 15 percent minorities among its employees. The FCC also requires that 25 percent of local minority labor be reflected in the company's top four job categories.

According to the recent statistics, minorities comprised 15.2 percent of all workers in units with five or more employees and 15.8 percent in MSO headquarters. Minorities worked in 12.8 percent of the upper four level jobs in cable units and 11.2 percent in headquarter offices. In addition, out of 12,071 new employees hired in cable units with five or more workers, 39.4 percent were women and 19.7 percent minorities, the FCC said.

NCTA noted that cable's 15.2 percent minority labor force surpasses the broadcast industry's minority workforce of 12.7 percent. Of all U.S. industries, minority employment averaged 11.7 percent in 1982, according to the Department of Labor Bureau of Labor Statistics.

NCTA and its minority affairs committee are currently surveying MSOs and major suppliers about minority commitments. Of 47 companies responding so far, NCTA said 96 percent have formal EEO programs; 63 percent have programs to recruit minorities into entry-level jobs; and 54 percent have programs to recruit minorities into managerial and executive level positions.

Based on reports from 4,501 cable employment units, the FCC counted a total of 57,897 employees, compared with 45,351 in 1981. The FCC arrived at a total 1982 employment figure of 71,493 by estimating the number of workers in offices with fewer than five employees, which are not required to designate the number of workers.

The employment statistics only reflect the system operations side of cable. The data does not include employment in programming offices, hardware manufacturing and supply companies or other related fields. *—Craig Leddy*

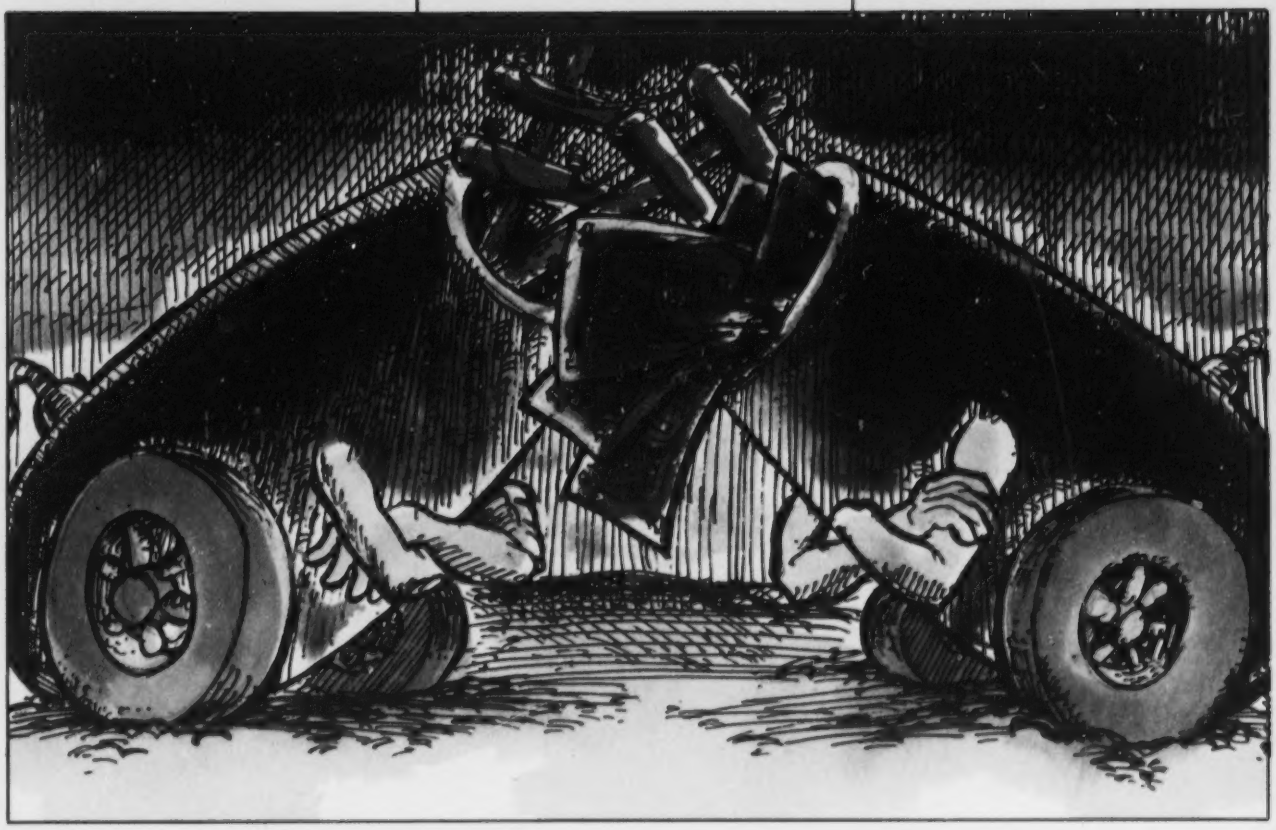
FCC cable television employment data

Employment at cable units having five or more full-time employees

	Number of employees		Percentage of employees	
	1981	1982	1981	1982
White male	23,257	29,150	57.6	55.6
White female	11,512	15,316	28.5	29.2
Minority male	3,675	5,093	9.1	9.7
Minority female	1,949	2,905	4.8	5.5
	40,393	52,464	100.0	100.0

Employment at cable headquarter units

White male	2,474	2,349	49.9	43.2
White female	1,792	2,226	36.1	41.0
Minority male	345	406	7.0	7.5
Minority female	347	452	7.0	8.3
	4,958	5,433	100.0	100.0



Cable and the telcos: from confrontation to detente

In what it clearly expects to be the watershed study of a watershed year, The Yankee Group will soon release its cable/telco report, nearly nine months in gestation.

By Jeri Baker

Easing confrontation? Reduced strain? That's what The Yankee Group, under project director Mark Kriss, senior research analyst at the consulting company, sees for traditionally tense relations between the cable and telephone industries.

"Cable and the Telcos: From Confrontation to Detente" is the first of six reports due this year in the Group's continuing Home of the Future series. This is the Cambridge-based think tank whose president, Howard Anderson, was telling *CableVision Plus* only 12 months ago that "a short-term solution is a (cable/telco) hybrid system, but the day you put that hybrid system in is the day you start to worry. . . about being taken advantage of in your reliance on a strong competitor." (*CV Plus*, 8/9/82, p. 4.) So the study is, itself, a bow to the strategic necessities facing such Yankee Group clients as Warner, Storer, AT&T, Southwestern Bell, Southern New England Telephone, Bell Canada, as well as General Instrument, Oak, Zenith, Coleco, Mattel, among a total of about 100 who will receive the report.

"Cable and the Telcos" went into its final drafts as the Senate, rejecting intense AT&T lobbying, approved S. 66, as half a dozen of the 22 Bell operating companies awaited reaction to various hybrid proposals made to cable applicants (hybrid systems are gearing up for testing in the Detroit and Chicago areas and perhaps in Philadelphia as well), and as news of equipment cost/performance breakthroughs in Canada and Europe made cable/telco accommodations more compelling than ever.

In the telecommunications world A.D.—after diversiture—AT&T and its offspring are at a crossroads. The cable industry, facing major city

builds and refranchising deadlines, is at a similar point in its own history. The Yankee Group asserts that the two would do well to shake hands as their paths converge. Where they could, why they should, and what would happen if they don't is the subject of the study.

Pay-per-view deployment

The Group categorizes local telco opportunities in the cable television marketplace as video transport services and pay TV support. (Table 1). It gives the most immediate bottom-line impact to the creation of pay TV hybrids, through which telephone lines are used to complete the interactive loop for pay-per-view order entry, billing and the like.

The demand for such arrangements, of course, depends on the growth of cable-only two-way addressability, which leaves no need for telco cooperation. According to the Group, that growth will be only modest (Table 2). But it expects one-way addressability "to explode." By 1985, it predicts, 21 percent of 36.9 million cable homes will have addressable converters. Further, 13 percent of all homes passed will have access to pay-per-view; that's nearly 2 million more than the 6 million the Group estimates as the threshold for pay-per-view programming power and profits. Table 3 shows the follow-on: the number of U.S. households to be served by hybrid systems, most of them just standard dial-up phones and one-way addressable converters.

Aside from the appeal of pay-per-view ready revenues, (Table 4), the market and political forces driving the development of hybrids include new franchise demands, where added revenue streams like business voice and data communications will be imperative for MSOs locked into costly promises, and refranchising, where local telcos could attempt to forestall community demands for two-way systems by demonstrating politically acceptable hybrids with similar capabilities. (By The Yankee Group's count, 60 percent of all franchises will come up for renewal in the next three to five years.)

Of the financial forces encouraging hybrids, the report estimates the cost to rebuild to two-way service a 30,000-subscriber, 35 homes/mile average system at 34 percent higher ($91 per customer) than a comparable one-way service.

The incremental cost of low performance two-way polling systems a la QUBE is put at 17 percent (or $90 per subscriber) over otherwise comparable one-way addressable systems that can be upgraded by means of a telco line. Polling systems might be the network of choice when data traffic is light, response time is not critical and access information is at the headend, but the Group contends that some hybrid networks work cost effectively as well, with no upfront investment by a system already one-way addressable.

In any case, the cable industry must approach the hybrid or go-it-alone question on the basis of the two-way services that are going to be "needed, demanded and accepted by their subscribers in the next five to 15 years, all (assessed) on the basis of fragmentary data." The Yankee Group drew the following conclusions in preparing its report:

- Most residential data traffic will be handled in inexpensive one-way or off-line (software downloading) modes.
- Those applications that cannot be handled on a one-way system are likely to be available to the growing number of communicating personal computers and video game consoles via telecomputer or Dial-It-type services.
- The vast majority of these units will be accessing telephone-based services for software downloading, network (multiplayer) games, and messaging.
- By 1985, many consumers will no longer enjoy the benefits of flat-rate local telephone service. They will be given the option of either packet- or time-sensitive rates, which may inhibit the growth of such services.
- The combination of time-

Table 1

Telco Options

	Video transport	Hybrid systems & service
Cooperative	Cable leasebacks; Cable interconnects	Cable pay-per-view
Competitive	Fiber optic upgrades; SMATV interconnects	Multichannel MDS; direct broadcast satellite

Source: The Yankee Group

Table 2

Cable TV growth: 1982-1990*

(U.S. households in thousands)

	1982	1985	1990**
Total TV HHs	83,700	86,700	94,700
Homes passed by cable	49,500	61,500	75,200
% TV HHs	59%	71%	79%
Cable HHs	28,205	36,900	48,100
% Homes Passed by Cable	57%	60%	64%
Pay-per-view HHs	1,900	7,800	28,860
% Cable HHs	7%	21%	60%
% Homes passed by cable	4%	13%	38%
Homes passed by two-way cable	197	3,769	14,104
% Homes Passed by Cable	less than 1%	6%	19%
Two-way cable HHS	67	1,357	5,416
% Cable HHs	less than 1%	4%	11%
& Homes passed by cable	less than 1%	2%	7%

*All data year end.
** Includes telco-operated cable systems.
Source: The Yankee Group

Table 3

Projected market size: hybrid cable/telco households*

(U.S. households in thousands)

	1982	1985	1990
Pay-per-view HHs	1,900	7,800	28,860
% Cable HHs	7%	21%	60%
% Homes passed by cable	4%	13%	38%
Hybrid PPV HHs**	1,833	6,443	23,444
% Cable HHs	6%	17%	49%
% PPV HHs	96%	83%	81%
% Homes passed by cable	4%	10%	31%

*All data year end.
**Includes all telephone order entry systems, including those that do not require the active involvement of local telcos.
Source: The Yankee Group

sensitive telco rates and mass market acceptance of on-line services such as network games should spur cable operators to forego the hybrid option and build their own packet switched networks.

Recognizing that short-term considerations will govern, the Group concludes that the decision about whether to pursue hybrid arrangements is going to hang on pay-per-view.

If telco lines are the least expensive way to accommodate subscriber demand in the 1984-85 time frame, "then The Yankee Group believes cable operators will set aside the bad blood between them and make a deal."

Flexible response

The Yankee Group defined three versions of hybrid systems:

1) Pseudo hybrids. Top of the line one-way addressable boxes that record viewing and display billing information on the screen. Units can be programmed to withhold pay-per-view events from households with delinquent accounts.

Pseudos are not a cost-effective response for the necessary impulse buying of pay-per-view events, the Group believes. The subscriber must master a complicated order and payment system. And the units advanced by Telease Inc. and Inter American Satellite Television are susceptible to piracy.

2) Quasi-hybrids. Subscribers order events in advance by mail or phone. Telephone order-entry functions can be automated at the cable headend or telephone central office. No in-home equipment is needed, unlike the pseudo-hybrid option, so impulse-buy pay-per-view can be introduced at little or no capital cost. But transaction techniques are cumbersome. Gillcable, the veteran of this form of selling, received such a deluge of last minute orders for the Cooney-Holmes fight, for instance, that the local telco had to cut off service for several hours.

Recognizing the market void that such a logistical nightmare betrays, more than a dozen hardware and software developments have been put forward to facilitate ordering by phone. Voice synthesis systems linking customers with computers, for instance, are one stop-gap short of two-way upgrades.

The Yankee Group gives first place to First Data Resources Inc., the American Express subsidiary that describes itself as the world's largest financial transaction processing company. Its Cable Control System interfaces QUBE's billing and headend computers so pay-per-view orders are registered on bills automatically with no clerical intervention. All eight QUBE operations will use the system. (Group W has announced it will, too, in an undisclosed number of systems.) FDR also offers telemarketing and transaction processing services to one-way systems through its WATS Marketing of America subsidiary.

The Yankee Group says it expects AT&T Long Lines and local telcos to offer similar pay-per-view telemarketing and order-taking services as early as 1984.

3) Transparent hybrids: Addressable converters that automatically monitor household viewing and periodically transmit data to a central billing computer. Bell Canada aims to field test a pay-per-view order-taking system it designed with Rogers Cablesystems and the Cable Telecommunications Research Institute. By using the Automatic Number Identification facility that every central telephone exchange has for long distance call purposes, it can process and transmit pay-per-view orders at five cable headend computers simultaneously. With processing at the central exchange office level, customers would rarely get a busy signal and impulse buys during the last minutes before an event could be accommodated.

The only modification needed to adapt most existing ANI facilities is an inexpensive black box equipped with microprocessors that "fool" the system into perceiving a long distance call. On the cable side, the requirements are a local private line between the telco office and the cable headend to forward pay-per-view orders, and software and microprocessors to handle incoming orders, match phone numbers to

Table 4

U.S. pay-per-view audience: Yearend 1985

(In thousands)

Carrier	Subscribers	% Addressable	PPV HHS
Cable TV	36,900	21%	7,800
DBS*	1,200	100%	1,200
STV**	1,400	79%	1,106
MDS***	1,356	52%	707
SMATV****	900	40%	560
TOTAL	41,756	27%	11,373

Assumptions

* Late-1983 launch of direct-broadcast satellite service by United Satellite Communications Inc.; subsequent launch of other low- and medium-power services in 1984.

** Includes low-power television; STV remains a single-channel medium.

*** Multi-channel MDS service available in top 20 markets by mid-1985.

**** Includes hotels

Source: The Yankee Group

subscriber addresses, send authorizations and record billing data.

The Yankee Group expects this "low tech" configuration "to rapidly emerge as the 'North American Hybrid System'."

On the American side of the border, both Illinois and Michigan Bell plan field tests of ANI-based pay-per-view ordering systems with cable operators in the Chicago and Detroit areas before the end of this year. But the Group expects the unwieldy nature of the system—developed by Bell Labs without cable input—to foil it. It requires a customer to key in a user number to verify paid-up accounts before it authorizes the transaction. That triples transaction time to 30 seconds or more and requires a touch-tone phone, which less than half of all U.S. households have. Lost, charges the Yankee Group, is the recognition of the impulsive nature of a pay-per-view buy that the Canadian system caters to.

Unilateral armament

Any edge that all the hybrid variations have in the marketplace could be eaten up, the Yankee Group surmises, by a successful pole-mounted two-way system that moves the tuning converter and associated electronics out of the set top unit to an outdoor location that serves several households. The incremental cost per subscriber of new pole-mounted systems over one-way addressable systems "could be as low as 14 percent (or $70 per subscriber); pole-mounted systems also could be cost-competitive in many upgrade and rebuild situations."

The Group contrasts the outdoor systems with such indoor contenders for the residential market in pay-per-view, energy management, network games, mail and messaging, telebanking and information retrieval as those converters identified with Jerrold and Cox Cable's Indax developments, initially with Oak. "The Yankee Group estimates new systems of this type cost about 25 percent more per subscriber than comparable one-way systems upgradeable to hybrid two-way capacity." It further judges that "installed costs of the home terminal approach compare less favorably with the addressable hybrid alternative in rebuild and upgrade situations."

PacketCable Inc., the leading proponent of the pole-mounted approach, is now holding engineering tests with a large MSO. According to The Yankee Group, it could be the standard against which the hybrid systems are judged, giving it the lead of non-packet-switched pole mounted systems from Toshiba (for ATC), C-COR, Thetacom and Texscan.

First strike capability?

What if cable operators refuse telcos' offers of hybrid support services? The Yankee Group expects the telcos to offer an alliance to cable competitors: STV, MDS, DBS. And they will invest in developing their own video transport service. The cable operators will try for a better deal with the likes of First Data Resources, the American Express subsidiary discussed above, or they will enhance their own networks with PacketCable or other high-performance alternatives, making them more directly competitive with the phone companies.

On the telco side, the Group predicts, the potential success for a cream-skimming alliance with a cable competitor is limited to the 8 million households in major cities that will not have cable before 1984)an opportunity window of about 24 months (Tables 5, 6, 7). That's too tight for all but "the most daring BOCs," judges the Group.

Peaceful coexistence

Onerous demands by franchise authorities in major cities and the surprise move by Southern Bell to lay fiberoptic cable to the customer termination point of all new residential installations starting in 1985—positioning the telco to move into video transport—set the stage, The Yankee Group believes, for

Table 5

Major cities without cable TV franchises

City	Households
Cleveland	218,000
Detroit	460,000
Los Angeles:	
South Central	210,000
E. San Fernando Valley	160,000
Philadelphia	600,000
St. Paul	110,000
St. Louis	178,000
Washington, D.C.	278,000
Total	2,214,000

Source: The Yankee Group

Table 6

Major awarded but unwired cities

City	Households
Baltimore	300,000
Chicago	1,114,000
Denver	216,000
Milwaukee	254,000
Minneapolis	170,000
New York:	
Four outer boroughs	2,530,000
Tampa/St. Petersburg	114,000
Total	4,698,000

Source: The Yankee Group

Table 7

Major cities under construction but not operational before 1984

City	Households	Estimated Completion
Boston	242,000	1984
Dallas	394,000	1984
Ft. Worth	160,000	1984
Miami	135,000	1984
Phoenix	100,000	1984
Total	1,031,000	

Source: The Yankee Group

confrontation or accommodation between cable and the local telcos in:

"A" counties that will not have cable before yearend 1985 (Table 8).

Growth markets, such as the Southeastern U.S., that are expected to have a housing boom.

The Group defines the likely accommodation as common carrier TV: "telco-owned and operated video transport facilities that are leased back to program packagers—cable TV companies, municipally owned cable authorities, satellite-delivered programming networks, or SMATV or DBS operations."

Actually, the Group suggested the same alternative in January 1982, just after the settlement of the AT&T antitrust suit. It believed then that the unleashed Bell operating companies would construct video transport facilities in major markets. Selected markets would be upgraded to full-motion video service by 1990 for about the same cost as installing coaxial cable. As gradual upgrading took place elsewhere, a "network of the future"—like those being developed in France, Germany and Japan—would be capable of providing fully switched two-way voice, video and data into every home and business.

The current report finds corroboration for its 1982 prediction in the proposed leaseback arrangements made by telcos to cable operators recently, in the development of fiber networks for metro areas' central phone exchanges that will be widespread by 1985, and the development by Times Fiber and British Telecom of "mini-hub" networks that can deliver lightwave video signals directly to the home.

What the Group did not anticipate, it says, is the "speed with which the BOCs would embrace the common carrier concept, or, more importantly, the fact that local telcos would perceive their efforts in this area as conciliatory—rather than threatening—to the cable industry."

That's not to say leaseback proposals have had much success. Bell of Pennsylvania, Michigan Bell, Illinois Bell and Chesapeake & Potomac (C&P) have approached generally unenthusiastic franchise applicants with offers to serve as exclusive subcontractors. The city of

Table 8

Potential common carrier TV markets

"A" county TV homes not passed by cable yearend 1985*

DMA	Total "A" TV HHs (000s)	"A" TV HHs Not passed by cable (000s)	% "A" TV HHs	BOC
New York	5,672	2,811	50%	New York Tel
Chicago	2,784	2,251	81%	Illinois Bell
Los Angeles	4,277	2,240	52%	Pacific Tel
Detroit	1,628	1,119	69%	Michigan Bell
Philadelphia	1,931	956	50%	Bell of Pa.
SUBTOTAL	16,292	9,377	58%	
Washington, D.C.	1,149	951	83%	C & P Companies
Cleveland	1,032	545	53%	Ohio Bell
Mpls./St. Paul	804	530	66%	NW Bell
St. Louis	851	509	60%	SW Bell
Denver	664	506	76%	Mountain Bell
SUBTOTAL	20,792	12,418	60%	
Baltimore	805	494	61%	C&P Companies
Boston	1,178	432	37%	New England Tel
Milwaukee	575	414	72%	Wisconsin Tel
San Francisco	1,967	407	21%	Pacific Tel
Miami	1,121	393	35%	Southern Bell
SUBTOTAL	26,438	14,558	55%	
Phoenix	615	360	59%	Mountain Bell
Tampa-St. Pete	697	288	41%	Southern Bell
Seattle/Tacoma	826	244	30%	Pacific NW Bell
Atlanta	781	168	22%	Southern Bell
Kansas City	508	159	31%	SW Bell
SUBTOTAL	29,865	15,777	53%	
Dallas/Ft. Worth	1,156	86	7%	SW Bell
Pittsburgh	834	29	3%	Bell of Pa.
Cincinnati	605	0	0%	Cincinnati Bell
Houston	1,205	0	0%	SW Bell
San Diego	725	0	0%	Pacific Bell
TOTAL	34,390	15,892	46%	

Notes to Table 8

* Yearend 1982 "A" County data courtesy of A.C. Nielsen Company; 1985 figures are Yankee Group estimates.

** Overstates uncabled market because: 1) some systems will be partially operational by yearend 1985; others (e.g., Denver) will be operational soon thereafter; 2) data may include smaller municipalities within "A" counties that are slated to be wired in the 1983-1985 time frame.

Source: The Yankee Group

Philadelphia was perhaps Bell of Pennsylvania's most supportive listener, and The Yankee Group notes in passing its belief that there is "latent support among municipal officials for telco entry."

Using that same proposal (for installation or leased trunk facilities or complete system lease) as a representative one, the Group lists as "strengths and motives" a number of items that apply elsewhere as well:

Bell of Pennsylvania has a number of customer service business offices in the city, it has experienced installation and service workers, it has centralized, computerized repair offices, billing computers and right-of-way paperwork.

Pros and cons

The Yankee Group agrees with the more aggressive telcos that "there are persuasive financial and strategic reasons why telcos should rapidly construct and own video transport facilities in addition to the high speed data lines now being tariffed" and in some cases already available.

For one thing, the marketing-oriented telcos see cable as a prod to them to modernize faster in order to gain the new revenue streams apparent in video transport services and future switched video services like tele-shopping, live video games and video teleconferencing. With

Noted in passing

In "Cable and the Telcos," The Yankee Group makes the following predictions:

■ Warner Amex will establish regional pay-per-view sports networks within the next two years in Dallas and Cincinnati, and eventually offer regional pay-per-view sports to its New York City and Milwaukee QUBE customers. To do this, Warner Amex may seek to establish regionwide interconnects. Potential partners in such ventures include a variety of local telcos.

■ Based on Yankee Group estimates of addressable converter growth, the PPV industry can—and probably will—win the as-yet unspoken for rights to both the 1988 Winter Olympics and the 1990 World Series. (ABC paid $91 million for the 1984 Winter Olympics.) Assuming, for example, that 55 percent of the projected 38.4 million addressable households in 1990 will pay $15 to view the World Series, then the gross pay-per-view revenue stream would exceed $316 million—more than enough to secure exclusive live coverage (barring adverse legislative action or an unexpected turnaround in the network's declining share of television audiences).

■ ABC's most risky new venture is TeleFirst, which will broadcast scrambled pay signals to home VCRs during affiliate off-hours. The Yankee Group estimates 18 million units will be installed in U.S. homes by 1985. TeleFirst will get feature films before STV and pay because it is likely to be considered as part of the videocassette rental market. The Yankee Group also sees TeleFirst as a likely outlet for adult films.

■ General Optronics (Edison, N.J.) has developed a high capacity laser-generated fiberoptic distribution method for cable television systems that will be installed by a major U.S. MSO within 12 months. Its capacity will approach that of telephone central exchange offices.

modernization, they figure, they can discourage early competitive entry by communications-oriented MSOs and others, they can slow their loss of market share in high-growth areas such as data and video transmission, and they can counteract the general perception that the telephone industry has lost its technological leadership.

But if telcos take the aggressive tack, they may sacrifice any chance of cable cooperation in hybrid systems, service and installation or interconnects. Even that is less compelling that one other "con" argument the report sets out: "BOC network planners are less than sanguine about their ability to reconcile the immature technology of digital lightwave communications with increasingly obsolete analog coaxial cable designs. Even state-of-the-art coaxial cable systems are not fully compatible with the telcos' planned network upgrades. Ideally, telco installation of video facilities to the home would not begin before 1986-87, at which point optical switching devices are likely to be perfected and available in volume."

In what may rate as one of the briefest summations of the cable/telco crossroads, The Yankee Group points out succinctly: "Cable systems have the broadband plant capable of delivering video signals but they have no switches; telcos, on the other hand, have plenty of switching power but no broadband. Both are working to develop the ultimate network—switched broadband."

That assessment opens the way for the Group's comparison of cable's congestion-prone "tree and branch" configuration—a headend feeding down a trunk signals that are split at branches and finally delivered via drop cable into every subscriber's home simultaneously—vs. telco "star" configurations—telephone lines radiating from a central exchange (the switch) out to individual subscribers.

In a broadband version of the switched star network—using coax or fiberoptics—the trunk of the star carries signals as far as a local hub where smaller capacity links radiate to each household.

Though they are more efficient—and though there are new cable hub systems like Times Fiber's—cost and technological imperfections still limit wide use of star configuration. More cable is needed, ducting is more expensive, and in the case of fiberoptics, switching equipment is imperfect. The report quotes Bell of Pennsylvania's estimate of the cost of wiring Philadelphia with an optical-fiber-based star network (ending with a coaxial cable drop to the home) at $300 million compared to $120 million for a conventional coaxial system.

But maintenance savings may be so large that initial costs are not the issue, argue other telco sources. And cost/performance trends in optical switching technology could bring the incremental cost per subscriber down to less than 20 percent. British Telecom, the report reveals, will install a switched star network ending with a coaxial cable drop to the home as early as end-1984, assuming regulatory approvals.

Such hybrid coax/fiber systems are being viewed as interim solutions in Europe and in the United States. The Yankee Group devotes special attention to United Tribune's plans to use Times Fiber's Mini-Hub for intra-city (rather than more conventional intra-building) installation in Alameda, Calif. The fiber-to-the-home and coax-to-the-hub configuration upends the traditional expectation that coax will be the final drop to the subscriber.

United figures the cost of the hybrid will run only 8 percent (about $50 per sub) above the dual trunk system it proposed for Alameda earlier. That assumes a 50 percent penetration of homes passed, second outlets in 7 percent of subscribing homes and a density of 200 per mile. Long-term savings in signal theft control and service calls should recoup the difference easily, the MSO assumes.

The Yankee Group, however, finds a major drawback to the installation in the ability of each of 1,400 mini-hubs in the city to serve only 24 households each (compared to a central telephone exchange office's minimum 10,000 homes served).

Overall, it concludes, although state-of-the-art technology cannot yet go beyond a single functional network (video only) to the home, all-fiber networks may be commercially available as early as 1985. "Ironically," the report notes, "with most major franchises already awarded, such networks may appear first in rebuilds rather than in high-density new-builds where they are more urgently needed."■

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Moving toward maturity

Analysts see continued difficult times but cable's track record ensures healthy support

NEW YORK—The cable industry's era of economic realism, which began last year with incipient shakeouts, mergers, management shifts and reassessment of market positioning, has continued into 1983. More than halfway through a calender year that analysts late last year said would prove "difficult," the financial picture is mixed—but far from bleak. Indeed, indications are that cable has weathered recent economic malaise better than most capital-intensive industries; MSOs with few new-build commitments and in highly penetrated suburban and rural areas stand to profit. On the flip side of the cable coin, firms still reeling from heavy franchise commitments, especially in urban areas, may face a wait of many months—perhaps years—before seeing these major systems become the "cash cows" that analysts have predicted they eventually may become.

Industrywide, even with smaller operators, system prices have generally declined; but along with a "buyer's market" climate has come a reduction—but by no means halt—in acquisitions of smaller systems and MSOs by larger players. The trend among many MSOs is to maximize revenues on present investments, rather than launch ambitious and costly expansion plans.

In that respect, the MSO side of the business reflects travail on the programming side, where advertiser-supported satellite services, including some pays, continue to face serious financial challenges that all of them may not be able to weather.

On the positive side, interest rates have moderated, hovering since February at about the 10.5-percent mark. That's considerably lower than the levels of early 1982, but still far above the single-digit rates that the industry enjoyed in earlier days.

Because many MSOs have completed or are in the final stages of financing committed new-builds, some analysts caution that stabilization of rates may not help all that much. But even these analysts concede that the leveling out of the cost of money can't hurt. Where financial arrangements allow, some MSOs engaged in new-build and rebuild financing are seeking refinancing at lower market rates, according to some financial consultants. These sources claim some firms are finding it in their interest to shift from insurance industry underwriting to bank financing, where terms are generally less restrictive.

But there could be other reasons for this movement as well. John Hancock, the major lender to the cable industry among insurance firms, with some $173 million in outstandings as of the end of last year, has put a hold on cable lending. According to one cable financier, it has done so as part of an evaluation of alternate TV technologies such as DBS and MDS, and how they may impact as competition to cable. Hancock spokesmen had not responded by press time to an inquiry but an official there confirmed the hold on cable lending.

The Hancock move, while generally unpublicized, has caused jitters among some insiders who fear that other lenders may follow, drying up a vital source of financial backing. That clearly is a worst-case scenario; few expect the bottom to fall out on cable as it is perceived by key lenders. But the Hancock decision demonstrates that the new technologies may be on the threshold of becoming more than just alphabet soup, but rather formidable competition challenging cable's effort to increase penetration and maintain the financial support it traditionally has enjoyed.

Leading the pack

Cable's preeminence as the medium of high-channel capacity and the advantages of broadband technology make it unlikely that the industry has that much to fear, maintains Henry Morneault, vice president of the entertainment industries group at Chemical Bank. His comments reflect the general view of cable backers: "Cable is still the best value, and every day it becomes more entrenched. As time goes on, that will mean less competitive inroads by alternate technologies." But Morneault shares the view that the passage of the days of "blue sky" and boosterism is a healthy sign for the maturing cable industry. "There are real problems, in marketing, management, advertising, excess channel capacity," Morneault says. "We can no longer afford to run blindly ahead, just assuming the industry is going to make money... the bloom is off the rose."

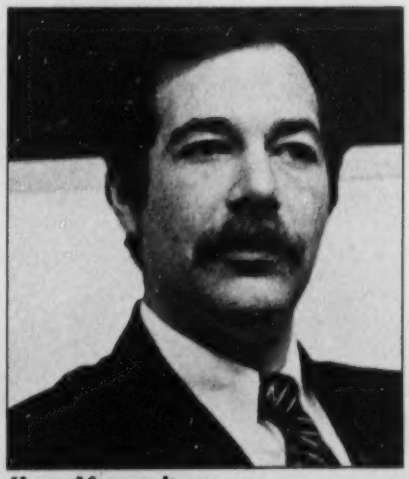
That is one reason why Morneault and some other analysts have revised their expectations of what constitutes a viable system. Whereas many industry watchers formerly anticipated operating margins in excess of 40 percent, with an average per sub, per month billing of $40 or more, Morneault says he considers a 30-33 percent margin respectable. Many analysts consider a $40 monthly billing average as unrealistic.

Anthony Hoffman of Cralin & Co., a venture capital firm, has long chided the industry for allowing itself to be caught up in the "promises, promises" syndrome in negotiations with city officials who, in some cases, either asked for, or were offered, the world. Now, Hoffman says, the trend has reversed; rather than pursue new franchises, some MSOs are selling off marginal systems, going into what he terms "a holding pattern—trying to derive reasonable profits from what they've got."

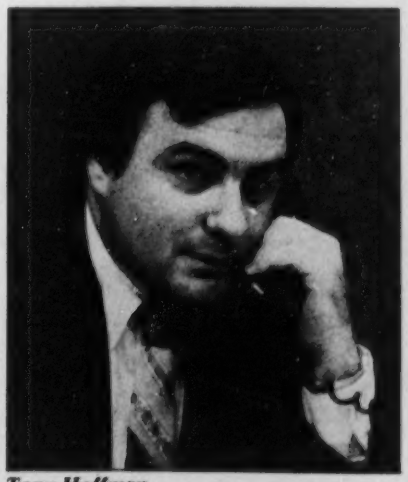
Continues Hoffman: "The industry is at the moment a little more confused than it thought it would be at this time. The lure of the big cities has proven to be a bit of a mirage. The invincibility of cable as the premier home entertainment medium is being called into question (due to DBS start-ups, etc.) And there are still franchising and rebuild cost questions in rural and suburban systems."

As a result, Hoffman says, "bottom-line performance (of MSOs) is almost totally dependent on where you are in new-builds and rebuilds. Ironically, MSOs that didn't get some of the big franchises are looking better than some that won."

Those saddled with the expenses of new urban builds, such as Warner Amex, are venturing in creative ways to finance construction, such as limited partnerships



Henry Morneault

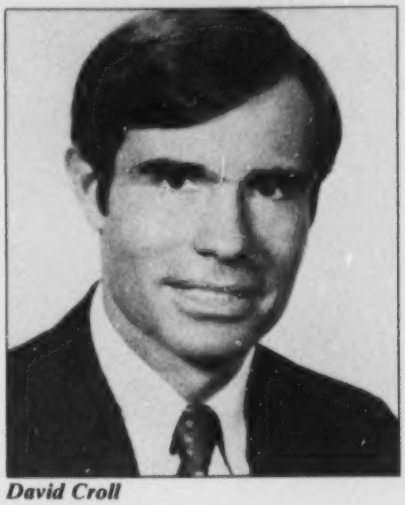


Tony Hoffman

rather than self-financing, Hoffman says. That way, the limited partners carry risk, reducing the burden of the MSO. Hoffman and others interviewed said limited partnerships increasingly will become a staple in the financing of cable new-builds and upgrades.

But heavy financial burdens raise the question of whether some firms might withdraw from franchise battles; Hoffman said some firms might walk away from Philadelphia and Chicago—unless they can be assured that much of the risk is borne by entrepreneur investors rather than the MSO alone.

Along with financial restructuring and an emphasis on marketing what they've got, MSOs also must redirect attention to studying what the consumer wants, rather than what cable officials think he or she wants, Hoffman said. "The industry for years has concentrated on what it can deliver," he said, maintaining that some of what cable can offer isn't really wanted by paying customers—and may not be economical to provide. With new competition from alternate technologies offering far fewer channels, the industry must persuade city fathers that, past promises notwithstanding, it just can't meet all the blue-sky expectations of the past. The cities, he maintains, "never asked citizens whether they wanted limited amount of channels for limited dollars"—precisely what Hoffman thinks would satisfy the majority of cable subscribers.



David Croll

Continuing the plateau

Phil Thoben, senior vice president, Firstmark Financial of Indianapolis, shares the view that the industry is continuing on a plateau. "There is some negativism (but) I'm still positive," he says. He sees continued growth in profit performance, but agrees that tougher economics has reduced acquisitions activity. That, he says, could lead to a comeback of sorts for smaller MSOs—which, in recent years, have been acquisition targets. Because of financial considerations, and concern over what's happing on the programming side, some larger MSOs won't be aggressively going after smaller systems as they have in the past, he says. Thoben also notes that merger, consolidation and a "shakeout" among programming services seems likely to continue: "It will take a lot of staying power for some to keep going." It may take the public some time to accept the harsh economic realities that may reduce their viewing choices, he says.

A mixed view comes from David Croll, managing partner of TA Associates, a venture capital firm in Boston. The financial community, he says, is becoming more "selective" in its cable dealings. "Large MSOs with uneconomic major urban franchises may fall out of favor," he maintains. Meanwhile, firms which have concentrated efforts in suburban and rural markets will be looked upon with greater favor. "It's what I call a two-tiered market," Croll says, borrowing a marketing phrase. "The financial community is drawing a line between (the two categories)."

Says Croll: "I'm more bullish than I ever was, when it comes to operators with the right kind of properties. But I'm staying away from the large, over-bid urban builds."

Although some analysts see a reduction in acquisitions, Croll predicts that major MSOs turning the corner will aggressively pursue independents. He also predicts further geographical clustering to achieve economies of scale; some of this will come about by system swaps, he says. And, like Morneault, Croll sees limited partnerships

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Croll sees the programming realm as the province of "big, well-capitalized players. The ones that have staying power and access to proprietary programming will make money. The also-rans will get killed." The also-rans are "the people who are not first in a programming niche that has strong consumer demand." The "shakeout," he says, is real and will continue, with under-capitalized players succumbing first.

Waiting out the recession

Mara Miesnieks, cable analyst with Smith Barney in New York, maintains that MSOs heavily involved in construction, whether new-build or upgrade, must endure a wait before they turn the corner. For some MSOs, that might not be for a couple of years, she says. "Hybrid operators"—those with interests other than cable—will enjoy better stock performance than "pure players," she maintains. But, analysts caution, stock performance is not always an indicator of bottom-line performance and may indeed run counter to it.

Miesnieks agrees with other analysts that the recession was not the industry's major problem. Construction costs and a shortfall in anticipated advertising revenues have more to do with less-than-expected returns, she maintains. The industry's plateau stage means fewer acquisitions; swapping may happen more frequently, she says.

On the programming side, Miesnieks agrees with others that cable programming must have "broad appeal." "I'm not trying to ring the death knell for narrowcasting, but someone with an idea is going to need some very deep pockets."

Harold Ewen, president of Communications Equity Associates in Tampa, Fla., deals with mergers and acquisitions and is bullish on the performance potential of smaller, rural, highly penetrated systems. DBS, he concedes, "certainly has some people concerned," especially as it impacts on small markets with high penetration but sparse channel capacity, with few premium or specialized programming services.

The looming threat of DBS may persuade operators of limited channel systems—even those satisfied with present operating margins—to upgrade, Ewen says. Most vulnerable to a potential DBS threat are 12-channel systems with only must carries and imported signals, and few satellite services. But, he adds, "in a rural marketplace, you don't need many satellite services for a system to be viable." Even with a programming shakeout, he maintains, there will be enough programming survivors to meet the industry's needs. For such small, highly penetrated systems, Ewen believes that 15 percent growth in cash flow annually is not an unrealistic expectation. But to maintain incremental growth in cash flow, he underscores, many systems must upgrade to satisfy subscriber desires in the face of coming alternate technologies. "DBS will have a tough time competing with (established) 35-channel cable systems," he says.

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Harold Ewen

A moderately bullish assessment of cable's performance comes from Chris Flor, assistant vice president at Heller-Oak in Chicago. While he hasn't discerned a major financial shift in the past six months, he maintains the industry has proven itself as "relatively recession proof"—despite shakeouts and a persistent churn problem, two things that have plagued the programming side. "The TV set seems to be the last to go in a household impacted by a recession," Flor said. "They may have cut down pay services from two to one, but they kept one."

That very phenomenon, some analysts comment, has meant big profits for highly penetrated systems and pay leaders (i.e., HBO) and shaky bottom lines for others not as fortunate. That is another reason why Flor joins other commentators in predicting that cable, like traditional broadcasting, will move toward broader-based programming, partially foresaking the "narrowcasting" philosophy that once drove the engines of the industry's image push. "There will always be innovative channels," says Flor, "but the bulk of the business is still being marketed to the Middle American TV watcher, the ones that don't have a home computer and are used to having a (relatively) small amount of programming" from which to choose.

Long term prospects

Several analysts maintain that a refocus on existing assets means greater attention must be paid to marketing. That, they say, should result in greater penetration and greater appeal of cable as a viable advertising vehicle. Charles Greene, president of AMCOM Inc. of Atlanta, a system broker, uses a railroad analogy: "We have built an enormous freight train, and we've got it loaded with 50 to 55 percent penetration in some markets. (Nielsen and Arbitron national penetration figures have yet to exceed 40 percent.) "In five years, we'll see penetration at around 65 to 70 percent, the equivalent to adding another 15 to 20 percent on a train that's already been built." Much of the additional cash flow will go toward helping the bottom line,

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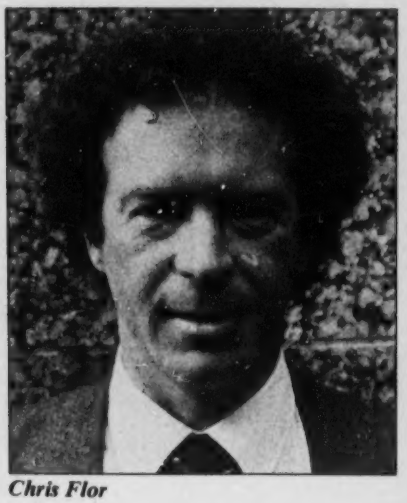
	Banks	Loan outstandings at December 31, (Net of participations and unfunded commitments) 1982	1981	1980
1.	Continental Illinois National Bank and Trust Co. of Chicago	$472,200,000	$240,000,000	$70,600,000
2.	Toronto-Dominion Bank	386,400,000	251,000,000	80,350,000
3.	Chase Manhattan Bank, N.A.	319,000,000	304,000,000	205,400,000
4.	First National Bank of Boston	285,000,000	185,000,000	138,442,000
5.	Bank of New York	211,000,000	104,700,000	55,900,000
6.	Manufacturers Hanover Trust Co.	178,260,000	186,870,000	44,735,000
7.	Citibank, N.A.	175,000,000	150,000,000	80,000,000
8.	Security Pacific National Bank	144,473,000	49,800,000	33,000,000
9.	First National Bank of Chicago	128,000,000	58,250,000	49,179,000
10.	Bankers Trust Co.	123,600,000	81,000,000	45,000,000
11.	National Bank of North America	115,000,000	90,000,000	74,000,000
12.	Interfirst Bank of Dallas	112,400,000	125,000,000	55,000,000
13.	Chemical Bank	99,225,000	22,280,000	22,200,000
14.	Bank of Montreal	95,000,000	50,000,000	N/A
15.	Provident National Bank	75,000,000	40,000,000	23,849,000
16.	Bank of New England, N.A.	71,773,000	45,603,000	11,600,000
17.	Wells Fargo Bank, N.A.	70,000,000	65,000,000	58,500,000
18.	American Security Bank, N.A.	69,130,000	47,000,000	26,800,000
19.	Philadelphia National Bank	65,900,000	50,500,000	20,500,000
20.	Bank of America NT & SA	58,000,000	35,000,000	16,835,000
21.	First Interstate Bank of California	52,900,000	16,530,000	7,100,000
22.	Republic Bank Dallas, N.A.	48,700,000	23,500,000	15,000,000
23.	Huntington Bank of Northeast Ohio (a)	48,000,000	44,500,000	33,221,000
24.	Fleet National Bank	45,000,000	35,000,000	30,000,000
25.	Connecticut National Bank (b)	44,400,000	26,500,000	17,300,000
26.	Bank of California	42,100,000	33,928,000	9,949,000
27	Fidelity Bank	40,473,000	51,500,000	42,000,000
28	First Wisconsin National Bank of Milwaukee	40,400,000	25,200,000	10,300,000
29.	Connecticut Bank and Trust Co.	32,000,000	24,000,000	25,000,000
30.	Pittsburgh National Bank	32,000,000	26,162,000	14,800,000
31.	United States Trust Co. of New York	26,300,000	24,600,000	18,500,000
32.	Lincoln First Bank, N.A.	25,300,000	5,900,000	N/A
33.	Crocker National Bank	23,000,000	N/A	N/A
34.	Society National Bank	23,000,000	20,000,000	N/A
35.	Merchants National Bank & Trust Co.	22,000,000	13,200,000	12,000,000
36.	Intrawest Bank of Denver	20,169,000	12,886,000	4,422,000
37.	First National Bank of Fort Worth	19,500,000	23,167,000	6,620,000
38.	Comerica Bank - Detroit	19,200,000	N/A	N/A
39.	First Union National Bank of Charlotte	16,800,000	N/A	N/A
40.	First National Bank of Maryland	16,400,000	N/A	N/A
41.	United Virginia Bank	15,314,000	0	N/A
42.	State Street Bank & Trust Co.	14,186,000	7,315,000	N/A
43.	First National Bank of Minneapolis	10,775,000	10,191,000	7,621,000
44.	Manufacturers National Bank of Detroit	10,560,000	7,450,000	N/A
		$3,941,878,000	$2,612,532,000	$1,365,723,000

(a) Formerly Union Commerce Bank
(b) Formerly Hartford National Bank

	Intermediate term lenders			
1.	Barclays American/Business Credit Inc.	$40,600,000	$42,000,000	$53,000,000
2.	Firstmark Financial Corp.	34,000,000	38,000,000	39,100,000
3.	Heller-Oak Communications Finance Corp.	30,350,000	30,650,000	35,000,000
4.	Becker Communications Associates	6,850,000	10,600,000	13,900,000
		$111,800,000	$121,250,000	$141,000,000
	Insurance Companies			
1.	John Hancock Mutual Life Insurance Co.	$173,000,000	$186,000,000	$180,000,000
2.	Aetna Life Insurance Co.	168,500,000	141,730,000	114,203,000
3.	Teachers Insurance and Annuity Association of America	167,985,000	148,830,000	154,000,000
4.	Mutual Life Insurance Co. of New York	111,000,000	118,000,000	102,100,000
5.	Travelers Insurance Co.	105,000,000	87,100,000	87,750,000
6.	Equitable Life Assurance Society	71,159,000	44,754,000	50,079,000
7.	Massachusetts Mutual Life Insurance Co.	55,000,000	60,000,000	68,000,000
8.	CIGNA	43,000,000	25,000,000	27,600,000
9.	Connecticut Mutual Life Insurance Co.	25,600,000	25,200,000	27,300,000
10.	Home Life Insurance Co.	22,000,000	32,000,000	37,043,000
11.	Phoenix Mutual Life Insurance Co.	15,304,000	16,132,000	18,391,000
12.	Union Mutual Life Insurance Co.	11,649,000	11,411,000	11,378,000
		$969,977,000	$896,157,000	$877,844,000
	TOTAL	**$5,022,875,000**	**$3,629,939,000**	**$2,384,567,000**

Source: A.G. Becker Paribas Inc.



Chris Flor

Greene said, and that is why he is "very bullish" on long-term cable prospects.

Kevan Fight, a division manager at Cleveland's Society Bank, believes that recent times have proven the industry recession "resistant." Economic conditions affected the pay- and ad-supported programming side of the business more than the system side, resulting in greater churn and a reduction in multipay. Thus, systems with good penetration levels and high reliance on basic service did relatively well, while urban markets and programmers suffered disproportionately. On the programming side, he says, that means "more losers than winners." But less players, he maintained, also could mean better programming due to economies of scale.

Also among the bullish analysts is Barbara Dalton Russell, vice president, Prudential-Bache in New York. She has predicted $6 billion in overall industry revenues this year, up from $4.5 billion last year. She maintains last year's predictions were met, and that "we're on target" this year. She predicts cable ad revenues of $300 million. Dalton Russell maintains that high interest rates did indeed have a significant impact on MSO bottom lines, and that the leveling off has reduced a squeeze on margins. But she concedes that economic factors have "stymied" the growth of pay and other programming services.

Dalton Russell agrees that some MSOs have fared better than others. She cited Storer and Warner Amex as two firms burdened by major new-builds, while TCI, which has stuck to smaller markets, enjoyed solid performance in her view. She sees ongoing consolidation and clustering, but maintains that rural operators with healthy margins will hold onto their properties: "It's unrealistic to expect there won't be a lot of small, rural operators. They run very profitable operations."

Daniels & Associates Senior Vice President Hugh McColloh also counts among the bullish. He cites improving economic conditions, stabilizing interest rates and a move toward limited partnership for financing as key reasons for his

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This notice appears as a matter of record only.
June 1983

Clark County Cablevision Ltd.

Serving Jeffersonville, Clarksville, Sellersburg, Charlestown and portions of Clark County, Indiana.

A limited partnership, managed by Daniels & Associates Inc., has obtained financing to retire seller-carried notes, in an amount up to:

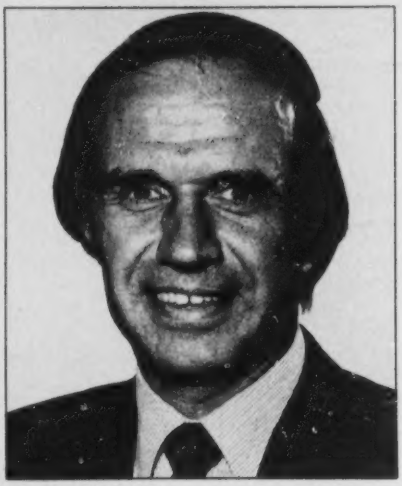
$6,500,000

From Society National Bank, Cleveland, Ohio.

Jay Busch
assisted in the transaction.

DANIELS
& ASSOCIATES INC
2930 E. Third Avenue
Denver, Colorado 80206

Financial Services to the Cable Communications Industry.



Hugh McCulloh

confidence. As for programming shakeouts, he takes a sanguine view: "If there's a weak programmer that bites the dust, that will not have a negative impact on the cable industry. If one goes belly up, (the operator) will take something else... The weaker are going to fall by the wayside in any business. By weak, I mean they didn't have a product in high demand... as time goes on, the trend will be away from quantity to quality. There may be room or demand for one dozen services or so, exclusive of pay channels."

Cralin's Hoffman, however, counsels against such unbridled optimism, saying that "unabashed enthusiasm" and the unrealistic expectations it sometimes spawns could spell disaster for the industry. Instead, he advises the industry to scale back both on expectations and offerings and look to satisfying subscriber's real needs—not the industry's perception of what subs need or want.

—Victor Livingston

Information network

Futurex to bypass standard personal computer market by connecting to cable

SACRAMENTO—Futurex, a Jones International subsidiary, plans to test a cable-based games and information network later this year, according to Futurex President Dan Morris. Using a Jones-designed home terminal unit, the service will bypass the standard personal computer market by connecting directly to a consumer's TV set and cable.

Each unit will be equipped with a microprocessor, giving it the capability to store downloaded software and provide interactive services. The Futurex service can use either two-way or one-way cable. In the case of one-way systems, the service

June 30, 1983

Urbana Cable Television, Inc.
a wholly owned subsidiary of
Communication Corp. of America
has acquired the assets of
C & A Cablevision
a CATV system serving the communities of
West Liberty, and Mechanicsburg, Ohio

***Todd Hepburn**, vice president of the undersigned, initiated this transaction and assisted both parties in the negotiations.*

THE TED HEPBURN COMPANY

P.O. Box 42401, Cincinnati, OH 45242 (513) 791-8730

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National cable advertising

This chart lists national advertising sales by the basic cable networks during June 1983.

ARTS
American Home Products (R)
Anheuser-Busch (R)
AT&T (R)
Carson Products (R)
Citizen Watch (R)
Coca Cola (Taylor Wines) (R)
Eastman Kodak (R)
Exxon (R)
Ford (R)
General Motors (R)
Greek National Tourist Organization (R)
Gulf Oil (R)
Halson (N)*
Lennox (N)
Mobil Oil (R)
Piper-Heidsieck Champagne (R)
Polaroid (R)
Prudential-Bache (R)
Universal Pictures (R)
University of Texas Press (R)
Warner Communications (Atari) (R)
Yves St. Laurent (R)

BET
American Home Products (R)
Anheuser-Busch (R)
AT&T (R)
Carson Products (R)
Coca-Cola (R)
Eastman Kodak (R)
Ford (R)
HBO (R)
Kraft (R)
Mobil (R)
Pepsico (R)
Philip Morris (R)
Pro-Line (R)
Procter & Gamble (R)
Sears (R)
U.S. Army (R)
Wrigley's (R)

C-SPAN
Getty Oil (N)
Merrill Lynch (R)

CBN Cable Network
American Home Products (R)
Armour-Dial (R)
ASP International (N)*
Carter-Wallace (R)
Emerson Electric (N)
Golden Eagles (N)*
Harest Maid (N)*
Hunt-Wesson (R)
J.C. Penney (R)
Richardson-Vick (R)
Rubbermaid (R)
Tonka Toys (N)
Toshiba (N)*

CNN
Canon (R)
Clorox (R)
Coca-Cola (R)
Colgate-Palmolive (R)
Emerson Radio (N)
Esmark (R)
General Foods (R)
Gillespie Refinishing (N)*
J.C. Penney (R)
Lipton (R)
Norelco (R)
Ralston Purina (R)
Seagram's (N)
Sears (R)
Tennessee Military Academy (N)*
Warner Lambert (R)
Winn Dixie (R)
Wrigley's (R)

CNN Headline News
Aloe (N)
Amway (R)
Bike (R)
Clorox (R)
Coca Cola (R)
Colonial Penn Insurance (R)
Dow Jones (R)
Dunlop (R)
Duracell (R)
Ford (R)
General Mills (R)
General Motors (R)
Ginsu (R)
Jeffrey Martin (R)
Lennox (R)
Phillips Petroleum (R)
Radio Shack (R)
Time Inc. (R)
Union Carbide (R)
Urban General (R)
Vitamix (R)
Wausau Insurance (R)
Weed Eater (R)
Winn Dixie (R)
Wrigley's (R)

Country Music Television
Anheuser-Busch (N)
General Mills (N)
General Motors (N)

Daytime
Ace Hardware (N)
Allied Corp. (R)
American Cyanamid (N)
American Egg Board (N)
American Home Products (R)
American Thread Co. (R)
Anchor Hocking (N)
Bandai America (R)
Boehringer/Ingilheirn (R)
Brown Shoe (R)
C.M. Offray & Son (R)
Campbell Soup (R)
Del Monte (R)
DMC (R)
Dow Chemical (R)
Ethan Allen (N)
General Foods (R)
General Mills (R)
General Motors (R)
H.J. Heinz (R)
J.C. Penney (R)
Kikkoman (R)
Kraft (R)
Leggs (R)
Levelor (N)
Manufacturers Hanover Trust (R)
Mobil Oil (R)
North American Phillips (R)
Nylint (R)
Pocket Books (R)
Procter & Gamble (R)
Quaker Oats (R)
Ralston Purina (R)
Revlon (R)
Scott Paper (R)
Sears Roebuck (R)
Simplicity Patterns (R)
Singer (R)
TWA (R)
Universal Pictures (N)
Warner Lambert (R)
Weight Watchers (R)
Whitehall Labs (R)

Dow Jones Cable News
Charles Schwab (N)
Golf Digest (N)
Hilton Hotels (R)
Smithsonian (N)
Standard & Poor's (R)
Waldorf-Astoria (R)
Working Woman Magazine (N)

ESPN
Armor All (R)
Arthur Smith Fishing Tournament (N)*
Bass Anglers Sportsman Society (N)*
Block Drug (R)
Borden's (R)
Cambridge (N)*
Castrol (R)
Certainteed (N)
Coca-Cola (R)
Combe (R)
CRC Inc. (N)*
David Crystal (N)*
Dow Jones (R)
Ektelon (R)
Foot Joy (R)
Gatorbait (N)
General Foods (R)
General Motors (R)
Golf Magazine (N)
HBO (Cinemax) (R)
J. B. Edwards (N)*
M & M Mars (N)
Ryder Trucks (N)
S.C. Johnson (R)
SCM (N)
Sears (R)
Sounder Sports (N)*
Sports Illustrated (R)
Super 8 Motel (R)
Tenneco (R)
Texaco (N)
Trustworthy Hardware (N)*
Universal Pictures (N)

Financial News Network
Ace Hardware (N)
American Monetary Association (R)
Andrew Peck (R)
Argentex (N)
Aristocrat Inn (N)
Artmark Sculptures (R)
Business Week (N)
Capital Preservation Fund (R)
Cardiff Publishing (R)
Charles Schwab and Co. (R)
Clayton Brokerage (N)*
Clayton, Brown & Associates (N)
Colonial Penn Life Insurance (N)
Commodities (R)
Dean Witter (N)
Dial Media (R)
Discount Plus Commodities (N)
Dow Jones (R)
Economy Research Ltd. (R)
Falcon Securities (R)
The Finer Edge (N)*
Fisher Stereo (R)
FXC (R)
G.E. Credit Corp. (N)
General Motors (R)
INC Magazine (R)
Inter/Car Leasing (R)
International Trading Group (R)
Investment Metals International (N)
Keystone Mines (R)
Kiplinger (R)
Lind-Waldock Commodities (R)
Mabon Nugent (R)
MCI (R)
Merrill Lynch (R)
Monex (R)
National Geographic (R)
Newsweek (R)
Novation Corp. (R)
OTC Review (R)
Paulson Investment (R)
Penny Stock Journal (N)
Prudential-Bache (R)
Quick & Reilly (R)
Remote Computing Group (R)
Research Magazine (R)
Rouse, Woodstock (N)
The Saturday Review (N)
Savings and Loan Association (R)
Sharper Image (N)
Smythe Wheatly (N)*
Standard and Poor's (R)
Stock Market Cycles (R)
Tandy Corp. (R)
Tennis Magazine (R)
Technology Illustrated (R)
Ultimate Exercise (N)
United Business Services (R)
Value Line (N)
Wellington Financial (R)
West Coast Metals (R)
William O'Neil (R)
Zond Systems (N)

MSN
Arkla (Family Gym Equipment) (N)
The Bradford Exchange (N)
General Foods (R)
MCP Pectin (R)
Norwegin-American Cruise Lines (R)
Scandinavian Airlines (R)
Schering (R)
Soap and Detergent Association (N)*
Swedish Tour Board (R)
Volvo (R)
Worldbook/Childcraft (R)

The Nashville Network
American Home Products (N)
Bradford Exchange (R)
CBS Records (N)
Chrysler (R)
Eastman Kodak (R)
Ford (R)
General Motors (R)
Global Life & Accident Insurance (R)
Gusto Records (R)
International Broadcasting (R)
Kraft (N)
Lorillard (N)
Pickwick (N)
Reynold's Industries (N)*
Silver Spur Records (N)*
Stroh (R)
Suffolk Marketing (R)
Time Inc. (R)
Vista Marketing (R)
Westwood Promotions (R)
The Weather Channel (N)

SIN
Anheuser-Busch (R)
Bendix (R)
Procter & Gamble (R)
S.C. Johnson (R)
Sears (R)
Texize (R)
Twentieth Century-Fox (R)
Universal Pictures (R)

SNC
American Motors (R)
Clorox (R)
Eastman Kodak (R)
ESPN (N)
Ford (R)
Franklin Mint (N)
General Motors (R)
Jeffrey Martin (R)
Lennox (R)
National Express (R)
Nashville Network (N)
Pfizer (R)
Phillips Petroleum (R)
Ralston Purina (R)
Searle (N)
Sports Illustrated (N)
Time Inc. (R)
Vista Marketing (R)
The Weather Channel (N)

SPN
Blue Ribbon Downs (N)*
Bridgestone Tires (N)
Continental Airlines (N)
Eastman Kodak (N)
Golfaps (N)*
Hoover (N)
JVC (N)
MGM/UA (N)
MPI Printers (N)*
Pan Am (N)
Standard & Poor's (N)

TeleFrance
Chanel (R)
Metropolitan Opera Guild (R)
TV Guide (N)
U.S. News & World Report (R)

USA Network
Allen Products (N)
American Edd Board (N)
Armour-Dial (R)
CRC Inc. (N)
Clorox (R)
Colgate-Palmolive (R)
Columbia Pictures (R)
Communications Workers of America (R)
Dannon (R)

Cable barometer

Television households (TVHH)	83,900,000
Homes passed by cable (HP)	51,019,700
Percent of TVHH passed by cable	60.8%
Basic cable subscribers	28,933,300
Percent of TVHH with basic cable	35.7%
Percent of HP with basic cable	56.7%
Pay cable subs	16,800,000
Percent of TVHH with pay cable	20.2%
Percent of HP with pay cable	32.9%
Percent of basic subs with pay cable	58.1%

Figures are as of May 31, 1983

Source: ICR, Cable Information Service—a Titsch Communications division

Del Monte (N)
Duracell (R)
Eastman Kodak (R)
Epson America (N)
Foodways National (R) Ford (R)
General Mills (R)
General Motors (R)
Globe Insurance (N)
Goodyear (R)
HBO (Cinemax) (N)
Hyatt Hotels (R)
J.K. Sports (N)
Johnson & Johnson (R)
Kellogg's (R)
Kikkoman (N)
Kimberly-Clark (R)
Lever Brothers (R)
Levi Strauss (R)
Mattel (R)
Mobile (R)
Nestle (R)
New American Publishing (N)
Noxell (R)
Orion Pictures (R)

Philip Morris (R)
Phillips Petroleum (R)
Playtex (R)
Quaker Oats (N)
Reynolds Metals (R)
Seagram's (R)
Sears (N)
Sorbothane (R)
Tennec.o (N)
Thompson Medical (R)
Toyota (R)
Twentieth Century-Fox (N)
Universal Pictures (N)
Volkswagen (R)
Warner Communications (R)
Warner Lambert (R)
Weber Grills (N)
Weed Eater (R)
Wrigley's (R)

The Weather Channel
American Motors (R)
ANCO (R)
Beaird -Poulan (N)

California Tree Fruit (R)
Champion Spark Plugs (R)
Chevrolet (R)
Eastman Kodak (R)
Haggar (N)
Hyatt Hotels (R)
Lennox Industries (R)
London Fog (R)
Phillips Petroleum (R)
Procter & Gamble (N)
Scott Paper (R)
Shell (R)
Union Carbide (R)
United Airlines (R)
Whirlpool (R)

WTBS
Alten Products (R)
American Cyanamid (R)
American Home Magazine (R)
Armour-Dial (R)
Block Drug (R)
Campbell's Soup (R)
Cambridge (N)*

CBS Records (R)
Chevrolet (R)
Coca-Cola (R)
Coors (R)
Dow Chemical (R)
Ex-Lax (R)
Firestone (R)
Florida Citrus (R)
Globe Insurance (R)
Goodyear (R)
Johnson & Johnson (R)
K-Tel (R)
Lipton (R)
Nylint Toys (R)
Procter & Gamble (R)
Shasta (R)
Stroh's (R)
Uniden (R)

* New to network advertising.
R denotes renewal client.
N denotes new client.
Source: ICR, Cable Information Service—a Titsch Communications division.

Cable services subscriber counts

Satellite-fed basic services	Affiliates	Subscribers	% change in subs from 4/30	
ACSN: The Learning Channel	445	3,419,642	+9.09	
AP News Cable	445	4,700,000	NA	
ARTS (Hearst/ABC)	1,839	11,000,000	+13.6	
Black Entertainment Television (BET)	207	4,259,079	+3.5	
Cable Health Network (CHN)	1,155	12,000,000	+9.4	
Cable News Network (CNN)	3,501	19,992,000	NC	
CNN Headline News	524	4,234,761	+4.25	
C-SPAN America's Network	1,000	13,000,000	NC	(1/83)
CBN Cable Network	3,976	21,282,000	+1.69	
Country Music Television	27	1,200,000	NA	
Daytime (Hearst/ABC)	702	9,500,000	+3.15	
Dow Jones Cable News	120	1,250,000	NC	
Electronic Program Guide (EPG)	75	1,109,464	NC	(12/82)
Entertainment and Sports Programming Network (ESPN)	6,075	23,051,554	+4.34	
Eternal Word Television Network (EWTN)	93	1,611,000	+67	
Financial News Network(FNN)	756	7,704,527	NC	(1/83)
Modern Satellite Network (MSN)	494	7,681,300	+1.30	
Music Television (MTV)	1,650	13,500,000	NC	
The Nashville Network (TNN)	901	7,500,000	NC	
National Christian Network (NCN)	93	1,451,647	NC	
National Jewish Television (NJTV)	114	2,446,735	NC	(2/83)
Nickelodeon	2,625	12,750,000	NC	
PTL Satellite Network	750	7,600,000	+13	
Reuters Monitor Service	NA	NA	NA	
Reuters News View	375	3,500,000	NC	(8/82)
Satellite News Channel (SNC)	612	6,500,000	+12	
Satellite Programming Network (SPN)	431	6,903,095	+2.31	
SIN Television Network[2]	215	25,713,800	NC	(5/83)
Trinity Broadcasting Network	255	3,105,000	+5	
UPI NewsCable	500	NA	NA	
USA Network	3,500	18,300,000	+4	
The Weather Channel	940	9,200,000	NC	(6/83)
WGN	3,976	11,084,783	NC	(11/82)
WOR[3]	737	4,038,289	-18	
WTBS	5,302	25,823,000	NC	(3/83)
Satellite-fed basic audio services				
KKGO-FM	10	700,000	+85	
Lifestyle	127	1,066,400	+6	
Moody Bible	23	316,723	NC	
Satellite Radio Network[4]	50	400,000	NA	
SCAN	12	108,000	NC	
WFMT	168	912,997	NC	(12/82)
Satellite-fed pay services				
Bravo	90	125,000	NC	(5/83)
Cinemax	1,800	2,500,000	NC	(5/83)
The Disney Channel[5]	726	200,000	NC	
EROS	22	200,000	NC	(2/83)
GalaVision[2]	180	125,000	+3.2	
Home Box Office (HBO)	5,000	12,500,000	NC	
Home Theater Network (HTN)	325	170,000	NC	(1/83)
The Movie Channel (TMC)	2,600	2,500,000	+4	
The Playboy Channel	275	500,000	NC	
Showtime	2,400	4,100,000	NC	(4/83)
Spotlight	234	750,000	NC	(3/83)
Regional entertainment services				
Atlanta Interfaith	7	120,000	NC	
Atlantis Entertainment Network	5	9,800	NC	(4/83)
Bay Area Religious Channel (BARC)	34	200,000	NC	(3/83)
Buffalo Sabres Hockey	9	325,000	NC	(2/83)
Festival-The Texas Cable Network	1	110,000	-15.2	

Regional entertainment services	Affiliates	Subscribers	% change in subs from 4/30	
Home Sports Entertainment (Dallas)	NA	NA	NA	
Home Sports Entertainment (Houston)	5	85,000	NA	
Home Sports Entertainment (Pittsburgh)	NA	NA	NA	
Life Newsvision (Chicago Suburbs)	4	11,000	+9	
Madison Square Garden	49	1,400,000	NC	(4/83)
Newsday Cable	1	190,000	NC	(4/83)
PRISM-Philadelphia	87	350,000	+1.42	
Sonics Superchannel	10	23,500	NC	(4/83)
SportsChannel (New England)	34	20,000	NC	(2/83)
SportsChannel (New York)	32	273,445	NC	
SportsVision[4]	10	10,000	NC	
Video Music Channel	4	102,000	NC	
Z-Channel	17	90,229	+17.7	

Announced regional services	Expected launch
Box Seat	1/84
Michigan Regional Sports	3rd quarter 1983
Pro-Am Sports (Detroit)	TBA
Supersports Network	TBA
TeleScripps (Pittsburgh)	TBA
Wisconsin All-Sports Network	9/83

Announced satellite-fed services	Expected launch
Almi Group Network	TBA
The Aloha Network	TBA
American Christian Television Systems	3/84
Apollo Entertainment Television	4th quarter 1984
Bluemax	TBA
The BuenaVision Channel	3rd quarter 1983
Cable Jazz Network	TBA
The Channel Black	3rd quarter 1983
Comedy Entertainment Network Telecommunications Station (CENTS)	9/20/83
The Community Channel	TBA
Episcopal TV Network	TBA
Kidvid Network	1/84
Magicable	3rd quarter 1983
National Jazz Network	TBA
The Nostalgia Network (Lewmark Productions)	TBA
PBS Cable	TBA
Rock 24 (Lewmark Productions)	TBA
Satellite News Channel II	4th quarter 1983
The Silent Network	early fall 1983
Sitcom Channel	1st quarter 1985
SolarVision	Fall 1983
The Sports Network (Group W)	April 1984
Sunshine Cable	2nd quarter 1983
Video Concert Hall	TBA
Video Music Channel	4th quarter 1983
The Work Channel (Lewmark Productions)	TBA

Note: Subscriber and affiliate counts are as of 6/30/83 unless otherwise indicated.
NA denotes not available.
NC denotes no change.
TBA denotes to be announced.
[1] Denotes new service to the chart.
[2] Total SIN reach. Total Spanish-speaking households: 3,199,100.
[3] Recount of subscribers and/or affiliates.
[4] Cable subscribers only.
[5] Figures are company approximations; actual count is higher.
Source: ICR, Cable Information Service—a Titsch Communications division.